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Plantaricin plays a role for post-fermented tea

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Post-fermented tea samples, before fermentation, primary and secondary fermentation process from each company were collected and studied. Klebsiella *pneumoniae subsp. ozaenae, Pseudomonas glareae, Klebsiella variicola*, and Pseudomonas aeruginosa were observed in tea leaf before fermentation. Furthermore, in primary and secondary fermentation *Lactobacillus plantarum* became one of the major lactic acid bacteria species can survive in these processes. The results showed that *plnA, plnEF*, and *plnNJK* existed in primary and secondary fermentation. Two potentials *L. plantarum* were isolated from post-fermented tea samples, *L. plantarum* IYO1501 and *L. plantarum* IYO1511. plnA and plnEF were encoded on plasmid of *L. plantarum* IYO1501 and *L. plantarum* IYO1511. Whereas, plnNJK was encoded on *L. plantarum* IYO1511 chromosome. Schematic representation of *plnA, plnEF*, and plnNJK gene cluster in *L. plantarum* showed different schematics gene cluster. The cluster structure of plantaricin encoding region was not shown yet around plantaricin gene region before. plnA on *L. plantarum* IYO1501 showed 96% homology of GenBank. The results showed clearly that *L. plantarum* IYO1501 and *L. plantarum* IYO1511 produced plantaricin on plasmid and on chromosome and play an important role for the success of the product.

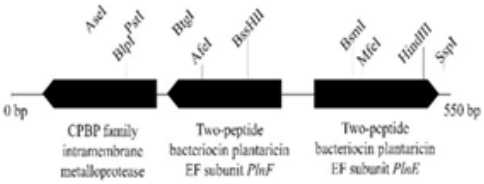

Figure: plnEF, Gene cluster L. plantarum IYO1501 on plasmid

Recent Publications

1. Strong Antimicrobial of Lactic Acid Bacteria and Species Identification of Virgin Coconut Oil Products in Padang West Sumatera, Indonesia (2017). International Journal on Advance Science, Engineering and Information Technology (IJASEIT)
2. Isolation and Characterization of *Lactobacillus spp*. From Virgin Coconut Oil, West Sumatra. 2018. International Symposium on Animal Production and Conservation for Sustainable Development
3. Probiotic Research in Several Products of Virgin Coconut Oil from Padang, Indonesia. 2018. Journal of Physic

Biography

Yolani Syaputri is pursuing her PhD at Gifu University. She has worked in the area of especially food fermentation, lactic acid bacteria, and bacteriocins. Currently, she is developing fermented tea from Gifu, Japan. She is interested to find a potential lactic acid bacterium which is isolated from many samples. She focused on identification bacteriocin gene or structural gene, immunity protein and secretion gene to get the genetic information and develop them to make a good product.